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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/600,395	06/20/2003	Keisuke Asami	14815-013001	8550

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EXAMINER	
WOOD, KEVIN S	

ART UNIT	PAPER NUMBER
2874	

DATE MAILED: 03/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/600,395	ASAMI ET AL.	
	Examiner	Art Unit	
	Kevin S. Wood	2874	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-9 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-9 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 20 June 2003 is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 6/20/03.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

NON-FINAL REJECTION

Specification

1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. **It is important that the abstract not exceed 150 words in length** since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

2. The abstract of the disclosure is objected to because it exceeds 150 words in length. Correction is required. See MPEP § 608.01(b).

Drawings

3. Figures 6-9 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Informalities

4. Claims 6, 8 and 9 are improper to because of the following informalities: Claims 6, 8, and 9 recite the limitation "the polarization maintaining fiber". There is insufficient antecedent basis for this limitation in the claim. Which polarization maintaining fiber, the first polarization maintaining fiber or the second polarization maintaining fiber. Appropriate correction is required.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 1, 3 and 5-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over 5,335,064 to Nishiura et al. in view of U.S. Patent 4,603,941 to Fujii et al.

Referring to claims 1 and 3, the Nishiura et al. reference discloses a crosstalk improvement module intervening between a first polarization maintaining fiber and a second polarization maintaining fiber, including: a first lens from making an output light from the first polarization maintaining fiber a parallel light; a polarizer for converting the parallel light into linearly polarized light; a second lens for concentrating the light and supplying the light to the second polarization maintaining fiber. See Fig. 19 of the reference. The Nishiura et al. reference does not appear to disclose the splitter for splitting an output light of the polarizer or a photoreceptor for receiving a portion of the split light split by the splitter. The Fujii et al. reference discloses a polarization maintaining fiber system utilizing a splitter (43) to direct a portion of light output by a polarizer (23) onto a photoreceptor (35,36) for the purpose of detecting variations in the light signal. Since the Nishiura et al. reference and the Fujii et al. reference are both from the same field of endeavor; the purpose of Fujii et al. would have been recognized in the pertinent art of the Nishiura et al. It would have been obvious to one having ordinary skill in the art to utilize a splitter and photoreceptor within the module taught by Nishiura et al., for the purpose of monitoring the signal and ensuring the system is working properly.

Referring to claims 5 and 7, the Nishiura et al. reference in view of the Fujii et al. reference disclose all the limitations of the claimed invention except for the first polarization maintaining fiber being connected to an input terminal of the crosstalk

improvement module by a receptacle. The use of input terminals and receptacles for connecting optical fibers to devices or modules is well known in the art. It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize a terminal and receptacle for the system for the purpose of making fiber easily detachable from the crosstalk module.

Referring to claims 6, 8 and 9, the Nishiura et al. reference discloses an optical component (45) conforming to a polarization maintaining optical fiber and being connected as the last component in a series of components.

8. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over 5,335,064 to Nishiura et al. in view of U.S. Patent Application Publication No. 20003/0223670 to Nikolov et al.

Referring to claims 2 and 3, the Nishiura et al. reference discloses a crosstalk improvement module intervening between a first polarization maintaining fiber and a second polarization maintaining fiber, including: a first lens from making an output light from the first polarization maintaining fiber a parallel light; a polarizer for converting the parallel light into linearly polarized light; a second lens for concentrating the light and supplying the light to the second polarization maintaining fiber. See Fig. 19 of the reference. The Nishiura et al. reference does not appear to disclose the splitter for splitting an output light of the polarizer or a monitor fiber for receiving a portion of the split light split by the splitter. The Nikolov et al. reference discloses a polarization beam splitter/combiner (Fig. 9-11), where a portion of an the light is directed into a monitor

fiber (593) and can be directed to an optical detector for the purpose of monitoring the power level. Since the Nishiura et al. reference and the Nikolov et al. reference are both from the same field of endeavor; the purpose of Nikolov et al. would have been recognized in the pertinent art of the Nishiura et al. It would have been obvious to one having ordinary skill in the art to utilize a splitter and monitor fiber for the purpose of monitoring the power in the optical signal and ensuring the system is working properly.

9. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over 5,335,064 to Nishiura et al. in view of U.S. Patent 4,603,941 to Fujii et al. in further view of U.S. Patent No. 5,561,726 to Yao.

Referring to claim 4, the Nishiura et al. reference discloses a crosstalk improvement module intervening between a first polarization maintaining fiber and a second polarization maintaining fiber, including: a first lens from making an output light from the first polarization maintaining fiber a parallel light; a polarizer for converting the parallel light into linearly polarized light; a second lens for concentrating the light and supplying the light to the second polarization maintaining fiber. See Fig. 19 of the reference. The Nishiura et al. reference does not appear to disclose the splitter for splitting an output light of the polarizer or a photoreceptor for receiving a portion of the split light split by the splitter. The Fujii et al. reference discloses a polarization maintaining fiber system utilizing a splitter (43) to direct a portion of light output by a polarizer (23) onto a photoreceptor (35,36) for the purpose of detecting variations in the light signal. Since the Nishiura et al. reference and the Fujii et al. reference are both

from the same field of endeavor; the purpose of Fujii et al. would have been recognized in the pertinent art of the Nishiura et al. It would have been obvious to one having ordinary skill in the art to utilize a splitter and photoreceptor within the module taught by Nishiura et al., for the purpose of monitoring the signal and ensuring the system is working properly. Neither the Nishiura et al. reference nor the Fujii et al. reference appear to disclose a variable optical attenuator, provided in a front stage or a rear stage of the polarizer, for varying the input light, wherein the variable optical attenuator is controlled according to the output from the photoreceptor. The Yao reference discloses an apparatus for connecting polarization sensitive devices, such as polarization maintaining optical fibers, where the apparatus (12) acts as a variable optical attenuator when used in combination with a polarizer, for the purpose of controlling the optical power in a polarization sensitive system. See Fig. 9A and Fig. 9B of the Yao reference. Since all three of the references are in the same field of endeavor, the purpose of the Yao reference would have been recognized in the pertinent art of the Nishiura et al. reference and the Fujii et al. reference. It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize a variable optical attenuator as taught by Yao when optically coupling a first polarization maintaining fiber to a second polarization maintaining fiber, for the purpose of limiting the output power which could lead to high losses within the polarization maintaining fibers.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin S. Wood whose telephone number is (571) 272-2364. The examiner can normally be reached on Monday-Thursday (7am - 5:30 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney B. Bovernick can be reached on (571) 272-2344. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KSW

Kevin S. Wood

AKM ENAYET ULLAH
PRIMARY EXAMINER